Using “BUGS” to Increase Student Participation

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Abstract

Technology is only as good as the results it produces. The use of simple radiophones and earbuds can provide support in action for students with disabilities as they learn to advocate for themselves at planning meetings. This article provides background for using bug-in-ear technology, including a training methods and materials list with students in pre-meeting practice sessions.

Keywords
self advocacy, bug-in-ear technology, transition, coaching

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The goal of every self-advocacy program is to get the student with disabilities to participate as fully as possible at his or her own IEP and transition meetings (Myers & Eisenman, 2005). Special education teachers are on the right track when they teach the individual steps to self-advocacy and self-determination in their special education classroom (Test & Neale, 2004; Van Reusen, Bos, Schumaker, & Deshler, 2002; Wehmeyer, Palmer, Argan, Mithaug, & Martin, 2000). Even with numerous opportunities for practice with role-playing, some students do not participate fully in their transition planning meetings. Teachers find some students are unable to apply what they have practiced in their comfortable classroom settings. By applying a simple piece of hardware, an earbud in what we are calling bug-in-ear (BIE) technology, teachers can prompt students to respond using the cues they were trained within their classroom.

The process involving BIE technology will allow the students to apply self-advocacy strategies at the meeting and receive immediate feedback from their teachers. Research indicates that immediate feedback allows the student to immediately correct his or her behavior and to practice the correct behavior, which provides for more practice opportunities (Mallott & Suarez, 2004). The teacher/coach will be able to provide cues and feedback on self-advocacy strategy steps the student has previously learned in a classroom setting. Self-advocacy strategies have typically been successful with students and adults with mild and moderate disabilities, and who are expected to make informed decisions regarding their future plans. Even with the knowledge and skills to be able to do this task, students often stumble because of other barriers, such as processing others' communication, lack of confidence, and poor attitudes toward their futures (Van Reusen et al., 2002). These barriers all become issues in the often unfamiliar setting of an IEP or transition meeting, which makes it difficult for the student to successfully contribute to the meeting. By using BIE technology the teacher/coach can sit aside from the meeting and provide feedback/cues to the student to employ parts of the self-advocacy strategy at the appropriate times. The teacher's role is not to tell the student what to say, rather to cue the student on the steps of the strategy.

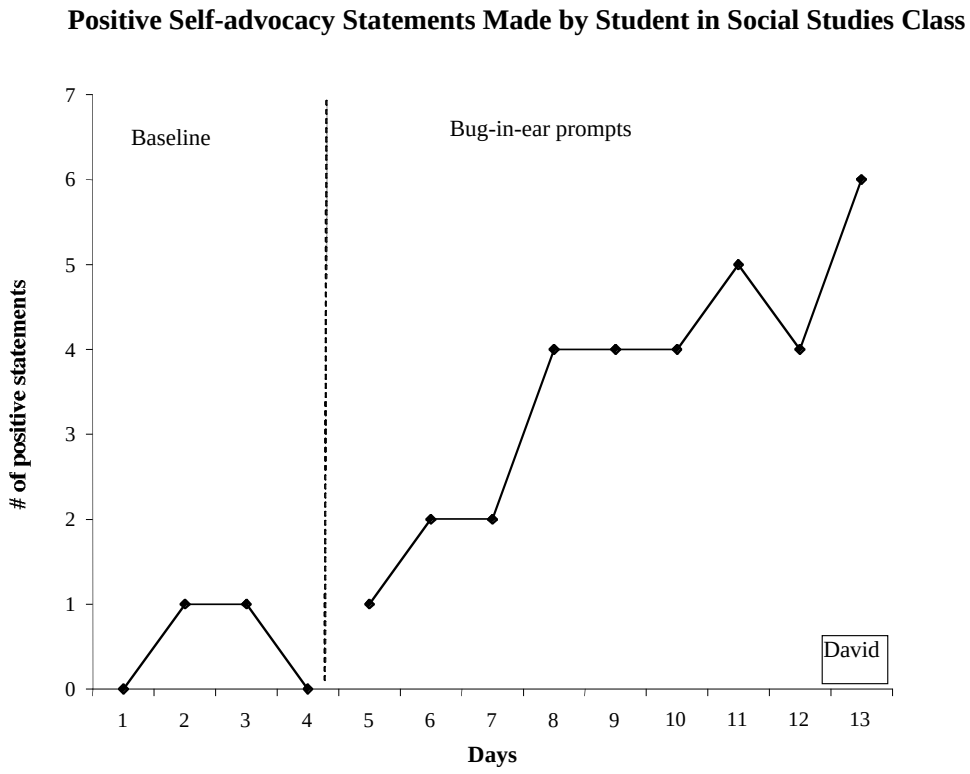
How BIE Works

Bug-in-ear (BIE) technology has evolved from its initial use in psychometrics (Korner & Brown, 1952) to many other professions including dentistry, teaching, retail, mass media, security, sports, and the general public (Goodman, 2005; Scheeler & Lee, 2002) . Most of us know BIE technology as the tiny earpieces that people wear while they talk on their cell phones, instead of having to hold the phone to their ear. BIE technology refers to a small earbud receiver that transmits verbal communication from a radio or cell phone device. When using BIE in a teaching or coaching situation, the coach delivers prompts and feedback to the person wearing the earbud to provide directives or cues for behavior. One example is a teacher's supervisor giving directions to a student teacher while they are teaching a class. The supervisor could give directions like "slow down," "keep teaching," or "ask question." In this scenario, the supervisor is speaking quietly into a radio transmitter and the teacher is wearing the other radio transmitter on her belt with the earbud receiver in her ear. No one can hear the prompts except the supervisor and the teacher. This allows the supervisor to help the teacher change her behavior without stopping the flow of instruction, and without

the students knowing that the prompts are even occurring. Other examples of BIE technology use are a quarterback receiving plays from his coach, a security officer or retail salesperson getting directions from a person in a control room who is watching surveillance video, and newscasters receiving direction from the show's producer.

Let's look at one case study of BIE in an applied setting. David is a tenth grade student with mild disabilities. His parents and teacher want him to attend his next IEP meeting as a way to increase his motivation to complete school and possibly go on to a vocational training program. Knowing David's demeanor, his teacher knows he will need a plan and plenty of practice to be able to "get through" the IEP meeting without incident. The teacher begins by increasing the number of positive, self-advocating statements David makes in a given time period. The teacher observed him in his social studies class (with a teacher who allows students to work together in cooperative groups). She listened to the group discussions and found that his positive self-comments (volunteering to complete a task, indicating what he was good at, responding to positive comments from other students) were typically minimal. David's teacher then began instruction in her special education classroom (approximately 20 minutes per day) with David and the rest of her class on identifying and stating positive self-advocacy statements ("I like it when the teacher gives me an outline of the next unit."; "I prefer reading textbooks in a small group - I can read faster that way." etc.). The teacher used

Figure 1.



role-plays and debriefing activities to teach the positive commenting. She also introduced David and the rest of the students to the BIE technology and used it during role-playing to give feedback to the students as they worked on their role-play activities. David's teacher then observed him again in his social studies class but used the BIE concept to prompt David when it might be appropriate to engage in a positive comment. His teacher sat to the side of his cooperative learning group, adding prompts (the same prompts she used in teaching the skills in the resource room) using the BIE technology. David's positive self-statements and self-advocacy comments increased. See Figure 1 for a visual representation of this process.

The Meeting

Just as the teacher in David's case did, special education professionals could act as a "coach" for students during IEP and transition meetings. A student with disabilities should be an integral part of their own IEP/transition meetings, but often they do not know what to expect at the meeting, or how they can fully participate. By practicing what they can do to better participate in their meeting beforehand, and having the BIE technology available during the meeting to hear prompts, this would take away some of the anxiety of having to remember everything they should do or say at the meeting. With the level of anxiety lowered, the student can then concentrate more fully on the meeting and what they want to say to the team in order to guide their transition plan. After training, the coach and student would attend the IEP meeting. The coach would sit aside from the meeting and provide prompts to cue the student to use skills taught in isolation. A sample dialogue from an IEP meeting is shown in Figure 2.

Technology Needed

The radio transmission systems consist of Motorola two-way radios, model number TFV500R, and single earbud/microphone systems. The TFV500R is able to be programmed for "silent alert" in order to eliminate disruption from the transmission alerts as they are being sent. The radios have 22 channels so that different sets at one site do not interfere with each other. Each student/coach team uses two radios and one earbud/microphone worn by the student. To decrease the need for batteries, use a single recharging unit for multiple radios. The earbud has a wire that is attached to the student's radio, and the radio is clipped onto the student's clothing or belt. The coach speaks directly into the radio at a very low volume so that the other participants of the meeting cannot hear the prompts; this allows for a more natural environment for the student. The student is the only one to hear the prompts and can then decide what to say next. This bug-in-ear equipment can be purchased at any common electronics store. The costs for specific components are approximately $30.00 for the radios and $20.00 for the recharging stand. Extra earbuds for each student cost approximately $5.00 each.

Technology needs:

- A pair of two-way radios with single earbud system
- Radio charger
- Extra earbuds (optional)

Approximate cost $50.00

Figure 2. Sample Coaching Interchange Using BIE

What is said at the meeting.
What the teacher/coach says.
What the student says.

David, please introduce the people who are here at the meeting.

This is my mom, and my special ed teacher, Mr. Harris. That is Mrs. Smith, my math teacher, and Ms. Davis, my social studies teacher. And I am David.

Thanks David. Do you know Mr. Garcia, who is over here (points to teacher/coach)?

Yes, he's my career exploration teacher.

Great. Let's get started. David can you tell us what you have been doing this year at Lincoln High School?

Ummm.

David - tell him what classes you are taking right now.

Ummm, well I have Government, Algebra, English, and Career Exploration. Oh, and I have Biology.

Good. How are you doing in your classes?

Ok, I guess. I got mostly C's, but I got a B in Career Exploration.

Sounds like you're working hard this term. The first thing we need to do is talk about your goals. What do you want to do after you graduate from high school, David?

Ummm. I don't know. Maybe be a cop.

Ok. Do you know what you have to be able to do to be a police officer, David?

Ummm. You have to be in shape, drive a car, and memorize the laws.

David, are those things that you are able to do?

Well, I get my license in a few months. So, yeah.

What about remembering the laws? Is that something you are good at?

I don't know.

David, can you tell me what you are good at in school?

Ummm. [Long pause]

David- refer to your strengths and weaknesses worksheet we worked on.

[David flips through some papers] **Ok, I am good at math, I am just not crazy about homework. I am real good with my hands. I help around the house with fixing things like lamps and stuff. I don't like writing reports too much, but I can fill out forms ok.**

[Meeting continues with intermittent prompts from the teacher/coach to help David find the answers on the materials he brought with him to the meeting.]

Training Steps

1. Practice opportunities are held individually with the student, to familiarize them with equipment and the prompt procedures.
2. The teacher/coach explains each part of the IEP meeting and how the student can participate during each part. For example, during introductions, the student should sit up straight, address the group, and introduce himself or herself as the student. Other self-advocacy strategies such as the "Plan" (provide information, listen and respond, ask questions and name goals) portion of "I Plan" (Van Reusen, Bos, Schumaker, & Deshler, 2002) can be practiced during this portion of the training
3. The teacher/coach explains to the student that they will receive prompts during their transition meeting on how they can participate in each part of their meeting. Prompts are used as cues for steps in the strategies they are to employ, for example, relax, eye contact, ask questions, etc.
4. As each part of the meeting is explained, the coach and student can then role-play that part of the meeting. They can also brainstorm what prompts the student might want to hear to help them remember what to do. By having the student suggest prompts, this engages them further in the planning process in the meeting.
5. To familiarize the student with using the radio and earbud materials, the coach should move to another part of the room while the student wears the earbud. The coach would then give prompts for some steps of the meeting and the student could practice what they would do in the actual meeting.
6. Once the student is comfortable with the equipment, a mock transition meeting can be held in the classroom with other students playing parts of the multidisciplinary team. Several students in the same class may be working on using this equipment for their own meetings and can take turns acting as the student during the role-play.
7. Once the student is comfortable with the bug-in-ear technology it would then be introduced into the transition meeting. Either the student or the coach can introduce the BIE to the other members of the team by explaining that the student will be wearing the earbud to be able to receive prompts from their coach as reminders during the meeting.

Training methods:

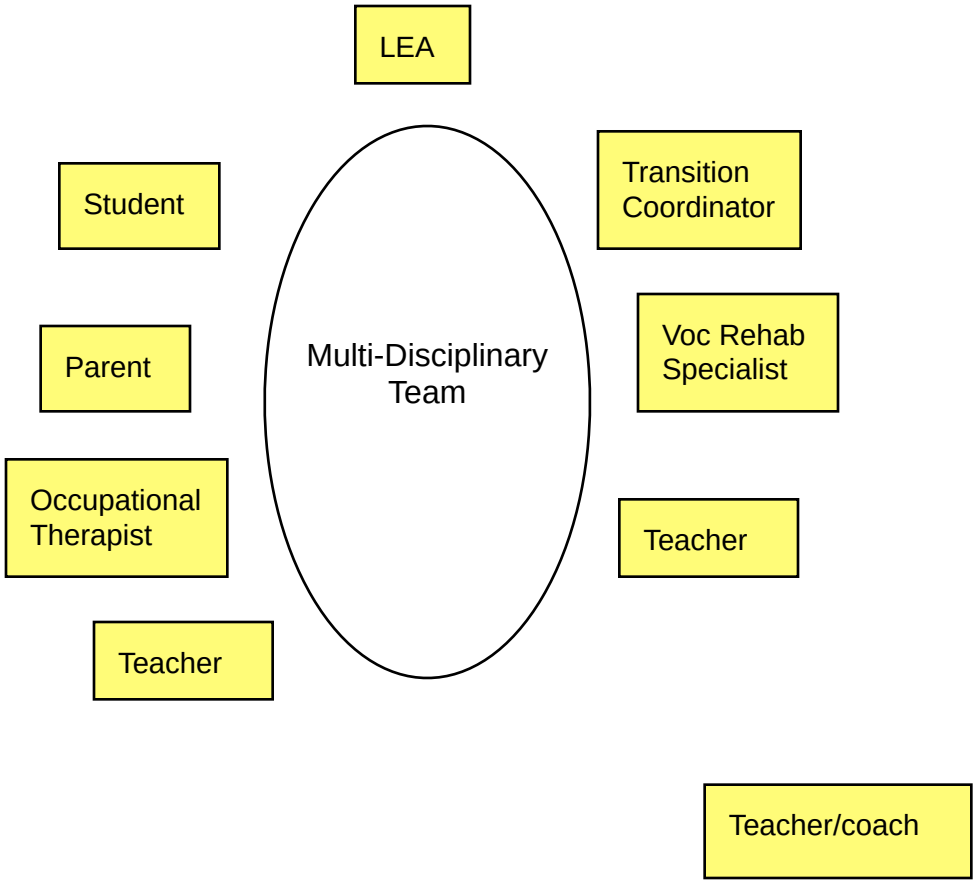
1) practice with the equipment
2) explain the meeting process and their roles*
3) describe the prompts and what they mean
4) role play responses*
5) add BIE to role plays*
6) role play mock meeting with other students and then adults*
7) introduce BIE to transition team and practice with team

* Ways to teach and practice self-advocacy strategies are presented Van Reusen, Bos, Schumaker & Deshler (2002).

Increasing special education student participation in crucial planning meetings is paramount to a special education teacher's goals. Special education teachers employ several methods which allow students to practice self-advocacy skills in settings as close as

possible to an actual planning meeting. These methods often include practice with strategies, video and audio tapes, past experiences, and role playing to practice the desired skills. In order to move to the next level the teacher needs to provide feedback in an actual setting, much as a job coach would in the work place, or a university supervisor would with a student teacher in a classroom. However, the thought of subjecting students to situations that are not always positive for the student keeps many teachers from tackling this area. BIE technology allows the teacher to prompt the student to employ only portions of the strategy when needed. Using the BIE process will allow teachers and students with disabilities to enter into a planning meeting with more confidence and with the expectation of more positive outcomes. The BIE technology is only limited by the students' ability to receive feedback and incorporate that feedback into their interactions with the planning team. We have looked at how to use this technology in transition meetings, and other research has demonstrated the successful use of BIE technology with novice teachers (Goodman, 2005; Scheeler & Lee, 2002). Other possibilities for the use of BIE technology include job coaches with students on job sites or teachers with adolescents to provide prompts during classroom social skills training. There may be many other applications where providing immediate, specific feedback would be helpful in real life settings with students, which with the use of BIE technology are only limited by your creativity.

Figure 3. Room Setup



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